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TENONIA KITSAPENSIS, A NEW GENUS AND SPECIES OF THE FAMILY POLYNOIDAE (POLYCHAETA) FROM PUGET SOUND (WASHINGTON)[1]

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Among the polychaetes collected in grab samples from several stations during studies of the benthic fauna of Puget Sound (Lie, 1968; Nichols, 1968) were many specimens of a new species belonging to a new genus in the family Polynoidae (listed as Polynoidae sp. I by Lie and Nichols).

Tenonia new genus

Type species: T. kitsapensis new species. Gender: feminine.

Diagnosis: Polynoid with a short body composed of up to 33 segments, with up to 15 pairs of elytra. Prostomial lobes rounded without peaks. The median antenna inserted dorsoanteriorly; the lateral antennae inserted ventrally. Notosetae and neurosetae numerous; all setae of approximately the same thickness. Notosetae and upper neurosetae with capillary tips; lower neurosetae with bifid tips.

Remarks: Of existing polynoid genera, *Tenonia* most closely resembles *Antinoë, Gattyana,* and *Hesperonoë* in general body form and type of some of the setae. These differ from *Tenonia* as follows: *Antinoë,* Kinberg (1855) as redefined by Hartman (1948) has distinct prostomial peaks, blunt notosetae, and all neurosetae end in fine tips. *Gattyana* McIntosh (1900), as emended by Pettibone (1953), has only stout neurosetae with simple hooked tips. *Hesperonoë* Chamberlain (1919) has prostomial peaks, some stout, blunt notosetae in addition to capillary notosetae, and subacicular neurosetae with smooth, unidentate tips.

The name was arbitrarily derived.

Tenonia kitsapensis new species
Fig. 1A–J

Material examined: The species description is based on 51 specimens. The holotype and 14 paratypes are deposited in the U. S. National

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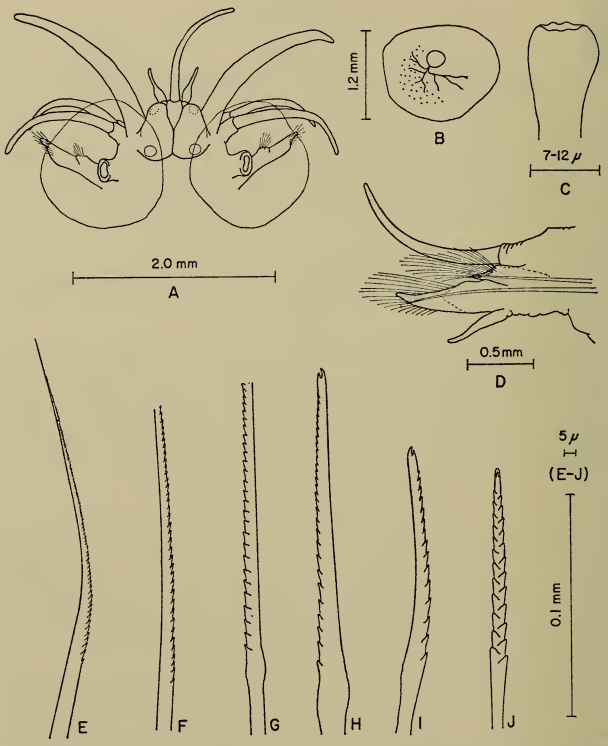

Fig. 1. *Tenonia kitsapensis* new species: A, dorsal view of anterior end; B, left elytron from middle of the body; C, elytral microtubercle; D, anterior view of 11th parapodium; E, upper notoseta; F, middle notoseta; proximal one-third of serrated blade shown; G, upper neuroseta, proximal one-third of serrated blade shown; H, middle neuroseta; I, lower neuroseta; J, cutting edge of lower neuroseta.

Museum. The holotype (USNM 38263) was collected in Port Madison, Puget Sound, Washington, 47°44′08″N, 122°32′00″W, 28 m depth, in fine sand with shell fragments (22 October 1965). Of the 14 paratypes, also collected in Port Madison, 4 specimens (USNM 38264) were collected with the holotype; 5 specimens (USNM 38265) at 47°44′09″N, 122°32′03″W, 30 m depth, in fine sand with shell fragments (21 October

1965); 4 specimens (USNM 38267, 9 January 1963) and 1 specimen (USNM 38266, 29 April 1963) at 47°44′31″N, 122°32′41″W, 12 m depth, in very fine sand. Of the remaining 36 specimens (author's coll.), 30 were collected at various stations in Port Madison along a transect between 47°44′04″N, 122°31′54″W and 47°44′35″N, 122°32′44″W, 2 to 34 m depth, in fine, clean sand to very fine, muddy sand (1963 and 1965); 5 specimens in Case Inlet, southern Puget Sound, Washington, 47°13′30″N, 122°49′36″W, 68 m depth, in soft mud (1963); 1 specimen near the eastern shore of central Puget Sound, 47°41′33″N, 122°24′18″W, 23 m depth, in fine gravelly sand (1963).

The species name is derived from the name of the land area adjacent to the type locality, the Kitsap Peninsula.

Description: Length 3 to 8 mm; width 1.4 to 3.2 mm without setae. Segments number 23 to 33. The body shape is oval, widest anteriorly, tapering gradually posteriorly. The anterior portion of the body is convex dorsally, while the posterior is flattened. The body surface is smooth and generally transparent. Coloration in formalin is variable, from specimens totally lacking in color except for the amber color of the pharynx seen through the body wall, to specimens with lightly speckled body and elytra, sometimes with dark intersegmental grooves.

The prostomium is strongly bilobed, but rounded anteriorly without cephalic peaks (Fig. 1A). Two pairs of large eyes, not seen on many preserved specimens, are positioned in the form of a square as seen from above. The anterior pair is located on the anteroventral edge of the prostomial lobes but is visible through the transparent prostomium. The posterior pair is located dorsally near the posterior edge of the prostomium. The median antenna with a large ceratophore is inserted anterodorsally in the notch between the prostomial lobes, the long smooth style projecting dorsally. The lateral antennae are inserted ventrally on distinct ceratophores with smooth bulbous styles approximately one-third the length of the style of the median antenna. The palps are smooth, thick, tapered, and somewhat longer than the median antenna. The tentacular cirri are also smooth and are similar in shape and length to the median antenna. The proboscis is well developed, cylindrical, with two pairs of jaws and a circlet of 18 terminal papillae.

Elytra number 15 pairs on the largest specimen, and are located on segments 2, 4, 5, 7, 9, . . ., 21, 23, 26, 29, and 32. There are fewer elytra on all other specimens, however, and in some cases there are only 13 or 14 pairs of elytra (29 to 31 segments) on what appear to be nearly mature females. On the first eight to ten segments the middorsum is not covered by the elytra. The elytra are pale and smooth with the exception of a clearly marked system of veins and a few microtubercles on the midlateroposterior region (Fig. 1B, C). Elytral margins are smooth and transparent. The perimeter of the elytral scar is marked with a circle of brown pigmentation on some of the specimens.

Parapodia are biramous with long smooth dorsal cirri, short pointed notopodia, long neuropodia, and ventral cirri of normal size (Fig. 1D).

The ventral cirrus of the first setiger is as long as the parapodium. Aciculae protrude slightly from the neuropodial lobes.

All setae are of approximately the the same thickness (5 to 10 μ) and are characteristically long, thin, and colorless (Fig. 1E–J), with longitudinal striations seen under high magnification. All notosetae are capillaries and are serrated for about one-third to one-half of their lengths (Fig. 1E, F). Upper notosetae (Fig. 1E) are short and bent. Lower notosetae are long and straight. Upped neurosetae (Fig. 1G) end in capillary tips, thereby resembling the notosetae. Lower neurosetae (Fig. 1H, I, J) are bifid. There are about 30 to 40 notosetae and 40 to 60 neurosetae in the largest specimen.

The pygidium is blunt with two long smooth anal cirri similar in size and shape to the dorsal cirri.

Diagnosis: A *Tenonia* species with smooth elytra, except for veins and few microtubercles. Elytra do not cover the middorsum of anterior segments. Eyes large, forming a square when viewed from above; the anterior pair located on the anteroventral edge of the prostomium; the posterior pair near the posterior edge. All setae slender, colorless, with serrated edges. Palps, antennae, and cirri smooth.

Distribution: Puget Sound, Washington; 2 to 70 meters, in sand and sandy mud. There were about 15 specimens/m^2 at the type locality.

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